

THE SELF-REFLECTION AND INSIGHT SCALE: A NEW MEASURE OF PRIVATE SELF-CONSCIOUSNESS

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This paper was aimed at investigating the construction and validation of the Self-Reflection and Insight Scale (SRIS) which is designed to be an advance on the Private Self-Consciousness Scale (PrSCS; Fenigstein, Scheier, & Buss, 1975). Previous work has found the PrSCS to comprise two factors, self-reflection and internal state awareness. In a series of studies two separate factor analyses found the SRIS comprised two separate factors labeled Self-Reflection (SRIS-SR) and Insight (SRIS-IN). The PrSCS correlated positively with the SRIS-SR and negatively with the SRIS-IN. The SRIS-SR correlated positively with anxiety and stress, but not with depression and alexithymia. The SRIS-IN was negatively correlated with depression, anxiety, stress and alexithymia, and positively correlated with cognitive flexibility and self-regulation. Implications of these findings for models of self-regulation and goal attainment are discussed.

Keywords: self-reflection, insight, private self-consciousness, coaching, psychological mindedness.

This paper was aimed at investigating the development and validation of a new measure of private self-consciousness: the Self-Reflection and Insight Scale (SRIS). Self-Reflection, the inspection and evaluation of one's thoughts, feelings and behavior and insight, the clarity of understanding of one's thoughts, feelings and behavior, are metacognitive factors central to the process of purposeful, directed change (Carver & Scheier, 1998). Purposeful progress

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through the cycle of self-regulation towards a specific goal rests on an individual's ability to monitor and evaluate his/her progress and use such feedback to improve his/her performance (Figure 1).

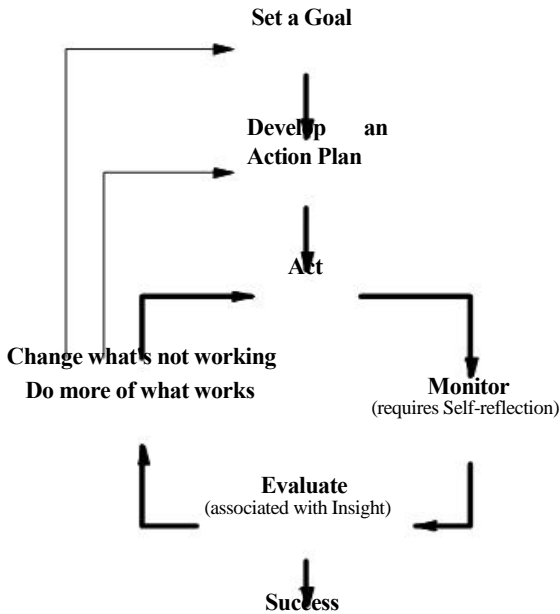


Figure 1: Generic model of self-regulation and goal attainment showing role of self-reflection and insight.

The development of reliable measures of self-reflection and insight would provide researchers and practitioners with the means to assess metacognitive processes such as psychological mindedness, self-reflection and insight and enhance our understanding of their roles in purposeful behavior change (Grant, 2001).

To date, such measurement has often been conducted using the Private Self-Consciousness Scale (PrSCS; Fenigstein, Scheier, & Buss, 1975). The purpose of the present studies was to develop a more reliable measure that could be used to examine levels of self-reflection and insight following a program of systemised change, such as occurs in the coaching process or in clinical practice.

THE PRIVATE SELF-CONSCIOUSNESS SCALE

The PrSCS is a 10-item measure assessing individuals' tendency to direct attention inwards (Fenigstein et al., 1975). There have been a number of

psychometric problems associated with the PrSCS. For example, although some factor analytical studies have found support for a unidimensional structure (Britt, 1992), it is now generally accepted that the PrSCS is comprised of two subscales; internal state (PrSCS-ISA) and self-reflection (PrSCS-SR).

The database PsycINFO lists over 280 papers related to the PrSCS, yet only 12 of these have discussed the distinction between internal state awareness and self-reflection and there has been some disagreement as to the specific items that comprise each subscale (Anderson, Bohon, & Berrigan, 1996; Burnkrant & Page, 1984; Chang, 1998; Conway & Giannopoulos, 1993; Creed & Funder, 1998; 1999; Kingree & Ruback, 1996; Mittal & Balasubramanian, 1987; Piliavin & Charng, 1988; Ruganci, 1995; Silvia, 1999; Watson, Morris, Ramsey, & Hickman, 1996).

In addition, it has been argued that the items of the PrSCS-SR do not accurately capture the essence of self-reflection because PrSCS-SR has been found to correlate positively and significantly with measures of psychopathology. It has been argued that this kind of psychopathology could be expected from rumination, rather than from a constructive self-reflection, and that the PrSCS-SR may be tapping a negative or dysfunctional self-absorption rather than measuring a constructive self-reflection (Anderson et al., 1996).

RECENT ATTEMPTS TO IMPROVE ON THE PRIVATE SELF-CONSCIOUSNESS SCALE

In distinguishing rumination from reflection, Trapnell and Campbell (1999) developed two separate scales. The "reflection" scale attempted to capture a nonpathological, philosophically orientated process of constructive self-examination.

Although the work of Trapnell and Campbell is an advance in differentiation between rumination and philosophically oriented reflection, it is not clear that the philosophical orientation of this scale is necessarily associated with metacognitive factors inherent in the self-monitoring of performance as individuals move or are coached through the self-regulatory cycle towards goal attainment. Further, Trapnell and Campbell do not include a measure of internal state awareness (or insight).

SELF-REFLECTION, INSIGHT AND SELF-REGULATION

The PrSCS-SR confounds motive to self-reflect with the actual direction of attention towards the self (Trapnell & Campbell, 1999). This is an important conceptual issue as a motive to perform a specific act and the execution of that act are logically independent. It may be that this fundamental conceptual confound is another reason that the PrSCS-SR scale has performed inconsistently in past research. This paper is the first to examine the relationship between these two factors.

The PrSCS-ISA correlates negatively with anxiety and depression (Watson et al., 1996). As insight is related to internal state awareness, scores on the insight scale of the SRIS (SRIS-IN) should be negatively correlated with depression, anxiety and stress. Predictions about the relationship between the self-reflection scale of the SRIS (SRIS-SR) and psychopathology are not so clear. If the SRIS-SR avoids tapping the rumination associated with the PrSCS-SR, then the SRIS-SR should not correlate with measures of psychopathology. Because it was not known a priori if the SRIS-SR would – in fact – avoid tapping a ruminative style of self-reflection, no specific predictions were made.

Internal state awareness and the related construct of insight are associated with the ability to identify and express feelings. Alexithymic individuals have a limited capacity to identify and express feelings (Loiselle & Dawson, 1988). Thus the SRIS-IN should be negatively correlated with measures of alexithymia.

The processes of self-reflection and insight are logically independent. One may spend considerable time in self-reflection without gaining insight. Thus no specific predictions were made about the correlation between self-reflection and alexithymia.

Goal attainment and self-regulatory processes demand cognitive flexibility. Cognitive flexibility refers to an individual's: a) awareness that there are options and alternative courses of action available in any given situation, b) willingness to be flexible and adapt to the situation, and c) self-efficacy in being flexible (Martin & Rubin, 1995). Thus it was hypothesized that there would be a positive correlation between both the self-reflection and insight scales of the SRIS and cognitive flexibility.

As reflection and insight are central to the self-regulatory process (see Figure 1), both scales of the SRIS should correlate positively with measures of self-regulation, and individuals who regularly monitor their thoughts, feelings and behaviors should have higher levels of insight and self-reflection. As journal or diary-keeping requires the self-monitoring of thoughts, feelings and behavior, responses of individuals who kept journals or diaries were compared with those who did not keep journals.

This paper reports three studies. The first study reported on an initial factor analysis of the SRIS. The second examined test-retest reliability. The third examined convergent validity of the SRIS. This final study also compared the responses of individuals who kept journals with those of individuals who did not, and included a second factor analysis of the SRIS.

STUDY 1: INITIAL FACTOR ANALYSIS

The aim of Study One was to develop the SRIS through factor analysis.

METHOD

Three doctoral level psychologists constructed items which they considered likely to load on the proposed scales. The scales were “insight” (10 items), and the two scales assumed to comprise “self-reflection”: “need for self-reflection” (10 items) and “engagement in self-reflection” (10 items).

TABLE 1
FACTOR LOADINGS FOR THE SELF-REFLECTION AND INSIGHT SCALE FROM STUDY ONE AND STUDY THREE

Item	Study 1		Study 3	
	Factor Analysis		Factor Analysis	
	Factor Loadings		Factor Loadings	
	1	2	1	2
	$\alpha = .91$	$\alpha = .87$	$\alpha = .71$	$\alpha = .82$
Engagement in self-reflection				
I don't often think about my thoughts (R)	.68	-.01	.32	-.07
I rarely spend time in self-reflection (R)	.78	-.02	.61	-.12
I frequently examine my feelings	.86	-.07	.85	-.09
I don't really think about why I behave in the way that I do (R)	.72	.10	.57	-.02
I frequently take time to reflect on my thoughts	.72	.01	.77	.04
I often think about the way I feel about things	.72	-.08	.72	-.02
Need for self-reflection				
I am not really interested in analyzing my behavior (R)	.71	.02	.63	-.05
It is important for me to evaluate the things that I do	.75	.00	.76	-.01
I am very interested in examining what I think about	.77	.01	.70	-.03
It is important to me to try to understand what my feelings mean	.79	-.04	.78	-.14
I have a definite need to understand the way that my mind works	.73	-.03	.72	-.17
It is important to me to be able to understand how my thoughts arise	.72	-.02	.80	-.14
Insight				
I am usually aware of my thoughts	-.13	.67	-.43	-.23
I'm often confused about the way that I really feel about things (R)	-.06	.79	-.18	.80
I usually have a very clear idea about why I've behaved in a certain way	.21	.66	.27	.60
I'm often aware that I'm having a feeling, but I often don't quite know what it is (R)	-.01	.66	-.13	.76
My behavior often puzzles me (R)	-.16	.78	-.17	.76
Thinking about my thoughts makes me more confused (R)	.05	.65	-.03	.73
Often I find it difficult to make sense of the way I feel about things (R)	-.06	.80	-.12	.87
I usually know why I feel the way I do	.07	.78	-.27	.63
Factor Intercorrelations				
Factor 1	1.00	-.03	1.00	-.31**

Participants and Procedure Two hundred and sixty undergraduate psychology students participated for course credit (127 women and 117 men – 16 participants did not indicate their gender; mean age = 20.58 years). Questionnaires were

completed in small group settings using a six-point scale (1 = *strongly disagree*, 6 = *strongly agree*).

RESULTS

Responses were subjected to a principal components analysis with varimax rotation to determine the optimal factor solution. Inspection of the scree plot found five rather than the expected two factors. Subsequently, items which showed minimal factor loading or loading on more than one factor were systematically eliminated.

A second principal components analysis with varimax rotation found a final two-factor scale consisting of a total of 20 items (see Table 1). These two factors accounted for 56% of the total variance. Six items from the engagement in self-reflection subscale and six items from the need for self-reflection subscale loaded on the same factor. This factor was labeled Self-Reflection (SRIS-SR). Eight items from the insight subscale (SRIS-IN) loaded on the same factor. Cronbach's alpha coefficient for the Self-Reflection scale was .91, and .87 for the insight scale.

There was a nonsignificant correlation of $r = -.03$ between the SRIS-SR and the SRIS-IN. There was no significant difference between male and female scores for either the SRIS-SR, ($F(1, 243) = .68, ns$) or the SRIS-IN ($F(1, 243) = .09, ns$).

DISCUSSION

The final factorial solution revealed two factors which were labeled Insight and Self-Reflection. Both scales had good internal consistency and performed better in this respect than the PrSCS-SR and the PrSCS-ISA, given that Anderson et al. (1996) reported Cronbach alphas of .63 (PrSCS-SR) and .56 (PrSCS-ISA). In accord with previous work (Creed & Funder, 1998) there were no differences between male and female scores.

The finding that the SRIS-SR and SRIS-IN were not correlated ($r = -.03$) appears to run counter to the generic model of self-regulation (Figure 1), which predicts a positive correlation between self-reflection and insight. Previous work has found that the relationship between SR and ISA is ambiguous (e.g., Burnkrant & Page, 1984) and this issue is further explored in Study 3.

An important and original finding of this study is that "need for self-reflection" and "engagement in self-reflection" loaded on the same factor. There has been considerable inconsistency in the research into private self-consciousness using the PrSCS, and it has been generally thought that these inconsistencies are due to the use of the PrSCS as a unidirectional measure when in all probability it is bidimensional. A less discussed issue with the PrSCS is the confounding of the motive or need for self-reflection with the actual engagement in self-reflective

acts. Clearly these are logically separate factors. However, the present study has found that they appear to be inextricably connected.

STUDY 2: TEST-RETEST RELIABILITY

In Study 2 test-retest reliability was evaluated over a seven-week period.

METHOD

Participants and Procedure Twenty-eight undergraduate psychology students participated for course credit (22 women and 6 men, mean age = 22.25 years). Questionnaires were completed in small group settings.

RESULTS AND DISCUSSION

The test-retest correlation over seven weeks for the SRIS-SR was .77 ($p < .001$), and was .78 ($p < .001$) for the SRIS-IN. Both scales compared favorably with the PrSCS given that Fenigstein et al. (1975) reported a test-retest correlation over a two-week interval of .79.

STUDY 3: CONGRUENT VALIDITY AND RELATION TO DIARY-KEEPING

To examine congruent validity, responses to the SRIS were correlated with responses to established, related measures. These measures were the 20-item

TABLE 2
MEAN SCORES AND CORRELATIONS OF THE SRIS WITH PSYCHOPATHOLOGY, ALEXITHYMIA, PRIVATE SELF-CONSCIOUSNESS, COGNITIVE FLEXIBILITY, AND SELF-CONTROL ($N = 121$)

	SRIS-SR	SRIS-IN	Mean	SD
SRIS-SR	1.00	--	49.00	11.88
SRIS-IN	-.31***	1.00	25.57	3.95
DEP	.15	-.21*	9.92	10.18
ANX	.32***	-.31***	9.12	8.24
STRESS	.21*	-.35***	16.17	10.94
TAS-20	-.09	-.39***	46.48	11.88
PrSCS	.59***	-.26**	37.06	5.36
CFS	.10	.26**	53.35	6.90
SCS	.02	.23*	132.82	31.81

Note: SRIS-SR = Self-reflection scale; SRIS-IN = Insight scale; DEP = DASS-21 depression scale; ANX = DASS-21 anxiety scale; STRESS = DASS-21 stress scale; TAS-20 = Twenty-item Toronto Alexithymia Scale; PrSCS = Private Self-consciousness Scale; CFS = Cognitive Flexibility Scale; SCS = Self-control Scale.

* $p < .05$, ** $p < .01$, *** $p < .001$

version of the Toronto Alexithymia Scale (Bagby, Parker, & Taylor, 1994), the Depression, Anxiety and Stress Scale (Lovibond & Lovibond, 1995), the Cognitive Flexibility Scale (Martin & Rubin, 1995) and the Self-Control Schedule (Rosenbaum, 1980). Study 3 also examined the differences between individuals who currently kept diaries and those who did not, and incorporated a second factor analysis of the SRIS.

METHOD

Participants and Procedure One hundred and twenty-one undergraduate psychology students participated for course credit (99 women and 22 men, mean age = 23.23 years).

Participants completed the questionnaires in small group settings. In addition to the measures detailed above, participants responded "yes" or "no" to the following question; "Do you currently keep a journal or diary on a regular basis in which you write about your thoughts and feelings?" Participants were informed that this question did not refer to keeping a time management or appointment-tracking diary.

RESULTS AND DISCUSSION

Pearson correlations between the measures mentioned above are presented in Table 2. There was a negative correlation between the SRIS-SR and the SRIS-IN. This is in contrast to the first study which found no relationship between these two scales.

There was a positive correlation between the PrSCS and the SRIS-SR, and a negative correlation between the PrSCS and the SRIS-IN. This finding further

TABLE 3
MEAN SCORES FOR SRIS-SR, SRIS-IN, DASS-21 ANXIETY, STRESS AND DEPRESSION SCALES, COGNITIVE FLEXIBILITY SCALE AND SELF-CONTROL SCHEDULE

	Did Not Keep Diary (<i>n</i> = 84)		Kept Diary (<i>n</i> = 37)		Statistical significance of difference score	
	Mean	<i>SD</i>	Mean	<i>SD</i>	<i>F</i> (1,119)	<i>p</i>
SRIS-SR	48.11	5.91	51.03	5.93	6.26	.01
SRIS-IN	27.07	3.89	25.43	3.89	4.56	.03
DEP	10.02	10.46	9.68	9.63	0.03	.86
ANX	8.26	8.15	11.08	8.21	3.06	.08*
STRESS	15.71	10.51	17.19	11.94	0.46	.50
CFS	53.15	6.48	53.78	7.86	0.21	.65
SCS	132.31	31.85	134.00	32.10	0.07	.79

Note: SRIS-SR = Self-reflection scale; SRIS-IN = Insight scale; ANX = DASS-21 anxiety scale; STRESS = DASS-21 stress scale; DEP = DASS-21 depression scale; CFS = Cognitive Flexibility Scale; SCS = Self-control Schedule.

* significant with a one-tailed test.

supports the need for a measure of private self-consciousness that differentiates between self-reflection and insight.

Scores on the SRIS-IN negatively correlated with measures of depression, anxiety and stress, and with alexithymia, and positively correlated with measures of cognitive flexibility and self-regulation. These findings provide support for the convergent validity of the SRIS-IN.

Scores on SRIS-SR did not correlate with measures of cognitive flexibility or self-regulation. There were positive correlations between the SRIS-SR and measures of anxiety and stress, but there was no relationship between SRIS-SR and depression and alexithymia.

Individuals who did not keep diaries had lower scores on the SRIS-SR than did those who had kept diaries (Table 3). However, diary keeping was not associated with higher levels of insight; scores on the SRIS-IN were lower for those who had kept diaries. There were no differences for self-regulation, depression, or stress, nor for cognitive flexibility. However, using a one-tailed test there was a significant difference between groups for anxiety, with journal-keepers being significantly more anxious than individuals who did not keep journals.

There was a nonsignificant correlation between the SRIS-IN and SRIS-SR ($r = -.08$, $p = .63$) for participants who kept diaries and a significant negative correlation for participants who did not keep diaries ($r = -.37$, $p = .001$).

A principal components analysis with varimax rotation was conducted. Two factors were specified. The emerging two factors accounted for 51% of the variance. Results are presented in Table 1.

MAIN DISCUSSION

These studies evaluate the validity of the SRIS, and explore the structure of private self-consciousness and its relation to self-regulation. These studies provide support for the validity of the SRIS as a measure of self-reflection and insight, and indicate that the SRIS is an advance on the PrSCS. Several findings support this conclusion.

Firstly, in accord with some previous work with the PrSCS (e.g., Burnkrant & Page, 1984) SRIS-IN and SRIS-SR loaded on different factors. A second factor analysis confirmed this factorial structure. Further, the SRIS has more items than the PrSCS, makes explicit reference to all three domains of human experience (i.e., thoughts, feelings and behavior), and the internal and test-retest reliabilities of the SRIS-IN and the SRIS-SR were better than those for the PrSCS.

CONVERGENT VALIDITY

The SRIS-IN demonstrated good convergent and discriminant validity. It negatively correlated with measures of depression, anxiety, stress and alexithymia,

and correlated positively with cognitive flexibility and self-regulation. The SRIS-SR, which was designed to measure a constructive style of self-reflection, was not related to depression. However, positive correlations between the SRIS-SR and measures of anxiety were found. Based on previous arguments (e.g., Creed & Funder, 1998) this may indicate that the SRIS-SR may be tapping a dysfunctional rumination or self-focused style of self-reflection.

THE RELATIONSHIP BETWEEN SELF-REFLECTION AND INSIGHT SUBSCALES

These studies have presented a number of original findings, some of which are somewhat counterintuitive. These findings suggest that the relationship between self-reflection, insight, self-regulation and goal attainment may be more complex than originally thought.

The first study found an orthogonal relationship between SRIS-IN and SRIS-SR. Drawing on the generic model of self-regulation presented in Figure 1, it could be predicted that self-reflection should be positively correlated with levels of insight.

Thus the orthogonal relationship between insight and self-reflection observed in Study 1 is somewhat counterintuitive. This finding may be explained by the notion that engagement in self-reflection does not necessarily mean that one has developed, or will develop, clarity of insight.

However, in contrast to the first study, Study 3 found that there was a significant negative correlation between SRIS-IN and SRIS-SR for the total sample, but also found that the relationship between SRIS-IN and SRIS-SR varied between participants who kept journals and those who did not. This finding may throw some light on inconsistencies evident in past research.

Past research on the PrSCS has found the relationship between self-reflection and insight to be somewhat inconsistent. Creed and Funder (1998) found a significant positive correlation between the PrSCS-ISA and the PrSCS-SR, where Kingree and Ruback (1996) found an orthogonal relationship. Such inconsistencies have tended to be explained by reference to the psychometric shortcomings of the PrSCS. However, the improved psychometrics of the SRIS in terms of number of items, internal constancy and test-retest reliability, reduce the chances of such inconsistencies stemming purely from poor psychometrics.

Some of the factors that influence the relationship between self-reflection and insight may include the extent to which an individual actually consciously engages in acts of self-reflection, the psychological mechanisms and behaviors that they use in the process of self-reflection, and the reason that they engage in self-reflection.

JOURNAL-KEEPING, SELF-REFLECTION AND INSIGHT

Individuals can engage in self-reflection in a number of different ways. For

some people self-reflection may be akin to an automatic appraisal process, requiring little or no overt effort (Ekman, 1992). For others, self-reflection may require conscious application of effort, and there is some evidence that individuals prone to anxiety tend to utilize a conscious and purposeful approach to self-reflection (Mansell, 2000).

To examine the effect of conscious and purposeful self-reflection or self-monitoring on levels of insight and self-reflection, the responses of individuals who kept a journal or diary in which they wrote about their thoughts and feelings were compared with those who did not keep a journal or diary.

A correlational analysis found the correlations between the SRIS-IN and SRIS-SR differed for those who did and did not keep journals. For journal-keepers there was a nonsignificant correlation between the SRIS-IN and SRIS-SR ($r = -.08, p = .63$), and there was a significant negative correlation for participants who did not keep diaries ($r = -.37, p = .001$).

This suggests that one confounding factor in previous research investigating the relationship between self-reflection and insight may be the extent to which participants engage in acts of conscious and purposeful self-reflection.

With regard to the differences for group means, contrary to predictions, diary or journal-keeping was not associated with increased levels of insight; participants who did not keep diaries in fact had higher scores on the SRIS-IN. As expected, individuals who had kept journals had significantly higher scores on the SRIS-SR scale, a finding which provides further and unique support for the validity of the SRIS-SR scale.

There are a number of possible explanations for the unexpected findings. For those who did not keep journals, it could be that these individuals (who had higher levels of insight than did journal-keepers) did not engage in the kind of conscious and purposeful self-reflection measured by the SRIS-SR. For such individuals the self-reflection process and the experience of insight may be automatic rather than deliberate.

For individuals who did keep journals, it could be that these individuals were not explicitly keeping them in order to increase their levels of insight. Indeed, Burt (1994) found that diary-keeping was often used as a means of providing an outlet for expressing thoughts, feelings, and emotions – a strategy for discharging unpleasant emotions, rather than an explicit means of gaining insight. Thus, it may be that participants who kept a journal were in some way stuck in a process of self-focused self-reflection and self-examination.

The idea that journal-keeping participants in the present study were in some way stuck in a process of self-focused self-reflection has some support also from past work on the Transtheoretical Model of Change (Prochaska & DiClemente, 1984). Individuals who have difficulty in making changes tend to spend more time thinking about their emotional reactions and ruminating on their problems

than actually focusing on solutions and attempting to change their behavior. Indeed, Lyubomirsky, Tucker, Caldwell, and Berg (1999) found that dysphoric self-reflection is characterized by a focus on the negative emotional aspects of personal problems rather than on a constructive problem-solving approach. Thus, such individuals may well lack the skills or resources to move from self-reflection through to action and insight (Grimley & Lee, 1997).

IMPLICATIONS FOR THE MODEL OF SELF-REGULATION AND GOAL ATTAINMENT The findings that journal-keeping is not associated with increased insight and self-regulation, and that there is not a positive correlation between the SRIS-SR and SRIS-IN scales, appear to run counter to the self-regulatory model presented in Figure 1. Thus, this model may need some revision.

This discussion suggests that there are different kinds of self-reflection involved in the self-regulatory cycle and goal attainment. In relation to coping with stress, Lazarus and Folkman (1984) distinguish between a problem-focused and an emotion-focused coping style. Adapting the approach of Lazarus and Folkman for use in the present study, we can speculate that there are at least two types of self-reflection.

One type may be a productive problem-solving or solution-focused approach in which individuals constructively reflect on how best to reach their goals. The other type may be a self-focused approach in which individuals attempt to understand, contain or dissipate their negative emotional, cognitive and behavioral reactions, rather than focusing on moving towards goal attainment.

This notion differentiates between problem-solving self-reflection (PS-SR) and self-focused self-reflection (SF-SR). The term *self-focused self-reflection* is used here in preference to the term *emotion-focused*, because this type of self-reflection involves a focus on more than just emotions - it includes reflection on cognitions and also on behavior.

Of course, individuals are likely to use both styles of self-reflection to some extent, although they also tend to show a preference for one style over the other. The conjoint use of problem- and self-focused coping style is commonplace. For example, in an analysis of 1,332 episodes of coping with a wide range of life issues, Folkman and Lazarus (1980) found that in 98% of the episodes both problem- and emotion-focused coping styles were used.

According to this revised conceptualization, individuals who engage in SF-SR are less likely to progress through the cycle of self-regulation towards goal attainment. Such individuals would be more engaged in SF-SR than in PS-SR. One would thus expect that SF-SR would be associated with difficulties in reaching goals.

If this were the case then it can be hypothesized that as individuals systematically work towards the attainment of a specific goal which they had previously

been unable to attain (and this lack of attainment was due in part to being overly engaged in SF-SR), their levels of insight would increase whilst their levels of self-focused self-reflection would decrease. The present study could not test this hypothesis, but such a study would provide useful insights into the metacognitive factors involved in purposeful behavioral change such as that which occurs in clinical or coaching practice.

There are a number of other limitations in the present series of studies. These studies employed a relatively small and homogeneous sample drawn from an undergraduate student population. Thus it is not clear to what extent these findings will generalize across age and educational status. Future research should seek to extend these findings with other populations. Further, the journal-keeping participants were self-selected. Thus it is not clear whether the observed differences in levels of self-reflection and insight are specifically related to journal-keeping, or to some other factors.

It is of interest, however, that Accardo, Aboyou, Alford and Cannon (1996) found there were no significant differences in scores on personality inventories between those who kept diaries and those who did not. Future research should investigate these issues and also seek to extend the SRIS and develop scales which further differentiate between SF-SR and PS-SR.

SUMMARY

This paper documents the development and validation of a new measure of private self-consciousness, the Self-Reflection and Insight Scale. The data presented in this paper indicate that the SRIS is a valid and reliable measure of self-reflection and insight which represents an advance on the much used, but oft criticized PrSCS. This paper has presented a revised model of self-regulation and goal attainment which distinguishes between SF-SR and PS-SR and has noted that further development of PS-SR scales is needed.

This paper also presents data that begin to shed some light on the complex relationship between self-reflection, insight, self-regulation and goal attainment. Past research using the PrSCS has often found ambiguous and often contradictory relationships between self-reflection and insight. The findings of this paper suggest that these ambiguities may be due to the influence of factors such as individuals' skills in self-evaluation and the extent to which they actually engage in conscious rather than automatic self-reflection through processes such as journal-keeping.

The development of this new measure of private self-consciousness provides researchers with a new instrument with which to investigate and measure the processes of self-reflection and insight, and in this way to further develop our understanding of the sociocognitive and metacognitive processes central to purposeful individual change.

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